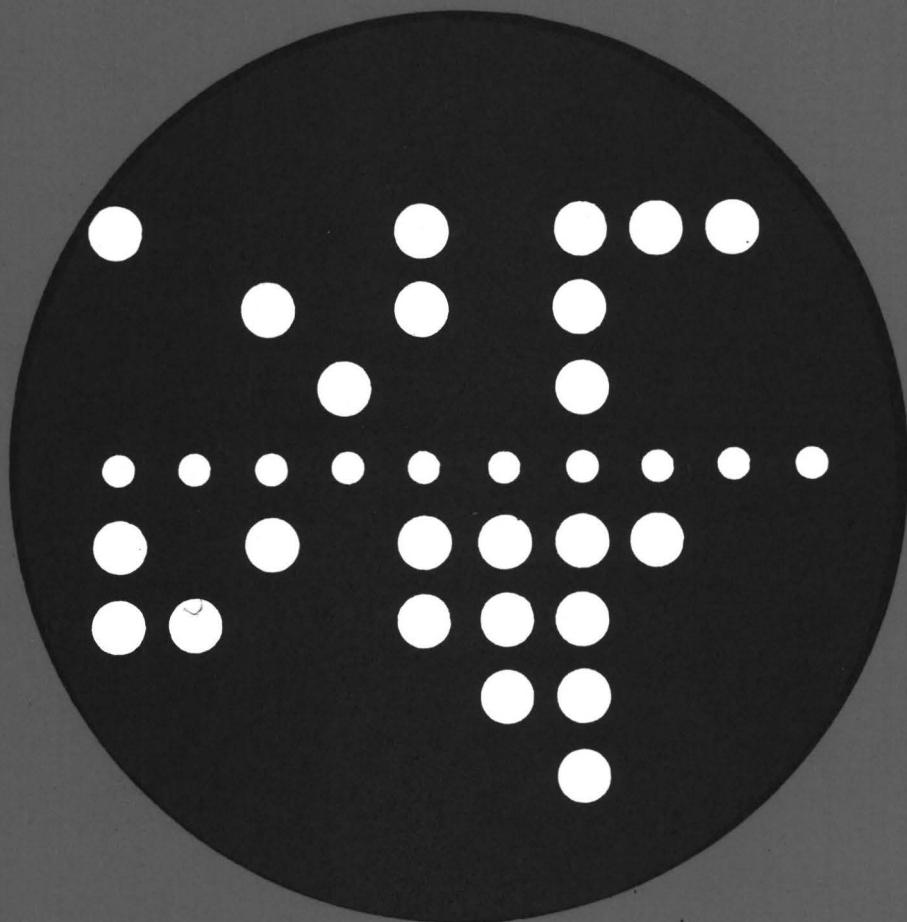


COMPUTING CENTRE NEWSLETTER

May 1978 • No 21

LIBRARY



Commission of the European Communities



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RESEARCH
CENTRE

Ispra Establishment

Oct. 1976

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Note of the Editor

The present Newsletter is published monthly except for August and December.

The Newsletter includes:

- Developments, changes, uses of installations
- Announcements, news and abstracts on initiatives and accomplishments.

The Editor thanks in advance those who want to contribute to the Newsletter by sending articles in English or French to one of the following persons of the Editorial Board.

Note de la Rédaction

Le présent Bulletin est publié mensuellement excepté durant les mois d'août et décembre.

Le Bulletin traite des:

- Développements, changements et emploi des installations
- Avis, nouvelles et résumés concernant les initiatives et les réalisations.

La Rédaction remercie d'avance ceux qui veulent bien contribuer au Bulletin en envoyant des articles en anglais ou français à l'un des membres du Comité de Rédaction.

Editorial Board / Comité de Rédaction

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Computing Centre References

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o Graphics and Support to Users	H.I. de Wolde	1883	1259
Adjoined	A. Pollicini	1886	701
Application Packages	A. Inzaghi	1887	755

Editor : Jean Pire
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Graphical and Printing Workshop, JRC Ispra

Courses and Seminars

H.I. de Wolde

Since some time it was planned to organize courses and seminars for the professional formation of the JRC personnel in the field of Informatics. During this year, the collaboration between EFIS and the Computing Centre has rendered already some results towards this scope.

These activities may be divided in three categories:

- **Basic courses.** Normally in the form of a one or two week full-time course to introduce basic informatics, or special fields of informatics, for an audience without experiences in the particular field.
- **Topic courses.** Instruction on special tools and software packages to programmers. The duration of these courses is in the order of 2-3 days.
- **Informatics Information Seminars.** These are short courses of about 1/2 day which are organized to explain particular items as are encountered at the practice of programming.

A preliminary summary of the actions in 1978 is given here.

Basic Courses

- Introduction to Informatics (2 weeks, June 12-23; 1978)
- Computer users training (2 weeks, Sept. 4-15, 1978)
- Programmers/Analysts training (2 weeks, Sept. 4-15, 1978)

Topics Courses

- Time Sharing Option (date to be established) 6 sessions, 2 days each: instruction with practical examples
- Computer Graphics: GINO-F (Febr. 21-23, 1978; attended by 29 participants)

Seminars

- Hasp Log and JCL Printout
April 26, 1978, attended by 25 participants
- Librarian/TSO Interface
May 11, 1978, attended by 15 participants. This seminar will be repeated after the TSO course
- Use of DEBUG statement in FORTRAN (date to be established)
- Computer Graphics: The GRAPHIT system (date to be established)

As the organization of these seminars is rather time consuming and also the financial investments are rather high, we are obliged to follow a strict registration policy. All the courses will be announced early and the interested persons have to subscribe.

For the seminars which take more than a few hours, the permission for participation from the Division Head is required.

The instruction at the Information Seminars will normally be given by personnel of the Centre. This bears the peril that the speaker is considered as the specialist in the particular field and that consequently all participants come to him with their specific problems. Please remember that these sessions are planned to decrease the personal involvement; if you encounter additional problems, you are kindly asked to collect equivalent questions and communicate a request for a more profound discussion through the Users Group to the Computing Centre.

The LIBRARIAN-TSO Interface now in Use

A.A. Pollicini

Summary of the new facility

The LIBRARIAN-TSO interface is a product of the software house Applied Data Research that distributes and maintains the LIBRARIAN system.

The philosophy of the interface is:

- to access information from a LIBRARIAN masterfile stored on an on-line diskpack
- to produce a copy of such information as a TSO data set, on which the user can operate by means of the usual TSO commands
- to restore the information actually contained in the TSO data set to the LIBRARIAN masterfile, providing both: replace or add option.

Thus, currently available LIBRARIAN services in batch mode, can be integrated by the conversational facilities offered by the TSO system.

The LIBRARIAN-TSO interface was recently installed at the Computing Centre and presented in a seminar held at Ispra on May 11, by Mr. Grandi of Syntax-Milan. It is reminded that the LIBRARIAN-TSO user reference manual may be obtained at the Computing Support Library.

In few words, the facility includes four commands:

LIBGET	to have a masterfile module accessible by TSO commands
LIBSAVE	to restore on the masterfile an interactively modified module
LIBLIST	to obtain at the terminal, information at module level
LIBINDEX	to obtain at the terminal, information at masterfile level

As a simple example, the logical path to update the module MYMOD on a masterfile named SYSU.OURMAST, will be:

- enter TSO LOGON command
- enter a TSO procedure
- enter LIBGET MYMOD DS('SYSU.OURMAST')
- enter the suitable series of TSO EDIT commands
- enter LIBSAVE *

Notice that the choice of the procedure depends on the contents of the module.

If the module contains:

- Assembler statements, the procedure must be ASHLOG
- Cobol statements, the procedure must be COBLOG
- Fortran statements, the procedure must be FG1LOG
- PL/1 statements, the procedure must be PL1LOG

otherwise any of the above procedures may be chosen.

Some practical implications

Since the interface can only communicate with catalogued masterfiles, some changes are needed in the specifications of any masterfile which is going to be accessed by terminal, therefore the users are kindly requested to conform to the new requirements that are discussed below.

All LIBRARIAN masterfiles to be accessed by terminal, must be catalogued under the common root SYSU, therefore their data set names shall be

'SYSU.name',

where name is any identifier complying with JCL rules:

A new masterfile may be catalogued at creation, thus the example shown at page 4 of the Green Book No. 1 'THE LIBRARIAN' changes now as follows:

THE CREATION OF A MASTERFILE

To initialize a new masterfile on a user's disk, one has to execute the job:

```
//JOB LIB DD DSN=LIBRA75,DISP=(SHR,KEEP),UNIT=DISK,
// VOL=SER=COPICB
//STEP1 EXEC PGM=$$URIAN
//SYSPRINT DD SYSOUT=A
//MASTER DD UNIT=3330,VOL=SER=USERnn,DSN=$YSU.name
// DCB=(BLKSIZE=6444,DSORG=DA),DISP=(NEW,CATLG,DELETE),
// SPACE=(CYL,(k))
//SYSIN DD *
-OPT INIT,DISK,options
/*
//STEP2 EXEC EURUDR,U=3330,V=USERnn
//GO.SYSIN DD *
```

reservation card

/*

in which: nn indicates a diskpack of the USER series
name is the name of your masterfile (max 8 char.)
k is the number of cylinders.

Another minor change takes place in the Restoring procedure, at page 16 of the Green Book, where the four occurrences of the word 'masterf' must be replaced by 'SYSU.name'.

Existing masterfiles must be renamed and catalogued. This task may be performed using the IEHPRGM. For instance, if there exists on volume USER04 a masterfile named MSTGEN, the following job will perform the needed operations:

```
//CATMST EXEC PGM=IEHPRGM
//SYSPRINT DD SYSOUT=A
//CTROOT DD UNIT=DISK,VOL=SER=USER01,DISP=OLD
//MASTER DD UNIT=DISK,VOL=SER=USER04,DISP=OLD
//SYSIN DD *
        RENAME DSNAME=MSTGEN,VOL=DISK=USER04,NEWNAME=SYSU.MSTGEN
        CATLG DSNAME=SYSU.MSTGEN,VOL=DISK=USER04,CVOL=DISK=USER01
/*
```

In addition, the reservation procedure must be performed for the renamed data set

Moving to a regular allocation of disk space

In the present situation there are two multiusers masterfiles:
SYSU.DEWOLDE2 and SYSU.LIBMF2 (formerly DEWOLDE2 and LIBMF2)
both on volume COPICB.

People having private modules on these masterfiles and working at a team level, are urgently asked to allocate a private masterfile for the team on one USERnn volume and move their modules onto the private masterfile using the procedure described at page 9 of the mentioned Green Book.

For example, a module MYMOD on SYSU.LIBMF2 may be moved to the private space, for example masterfile SYSU.OURMAST on USER02 by the job:


```
//STEP1      EXEC LIBRAP,A='SYSU.LIBMF2',E='COPICB'
//SYSIN DD *
-OPT UTILITY
-OPT
-ADD NEWMOD,LIST
-DESC .....
-PGMR .....
-INC MYMOD
-EMOD
-END
/*
//STEP2      EXEC LIBRAP,A='SYSU.OURMAST',E='USER02'
//SYSIN DD DSN=*.STEP1.INS.OSJOB,DISP=(OLD,DELETE)
```

Also other procedures of transferring modules between masterfiles are possible.

After successful completion of the transfer, the module on SYSU.LIBMF2 must be deleted.

The Computing Support Library informs users that the following manuals are available for distribution:

ADABAS-Utilities Manual	Lit. 45.000
ADABAS-ADAMINT Reference Manual	Lit. 22.000
ADABAS-ADAWRITER Reference Manual	Lit. 18.000
SC28-6433 IBM OS (TSO) COBOL Prompter	
Terminal User's Guide and Reference	Lit. 10.500

Order forms for the manuals are available at the office of Mrs. Cambon (building 36 - Tel. 730).

Remember that the Computing Support Library only accepts requests with the budget number signed by the programme manager (activity sheet holder), to assure payment.

EQUIVALENT TIME TABLE FOR ALL JOBS OF THE GENERAL SERVICES - Monthly and Cumulative Statistics

	January	February	March	April	May	June	July	August	September	October	November	December
Year 1977	44	74	78	32	26	36	27	25	27	31	40	34
accumulation	44	118	196	228	254	290	317	342	369	400	440	474
Year 1978	51	43	55	50								
accumulation	51	94	149	199								

EQUIVALENT TIME TABLE FOR THE JOBS OF ALL THE OBJECTIVES AND GENERAL SERVICES - Monthly and Cumulative Statistics

	January	February	March	April	May	June	July	August	September	October	November	December
Year 1977	135	218	312	193	180	269	244	196	277	275	284	179
accumulation	135	353	665	858	1038	1307	1551	1747	2024	2300	2584	2763
Year 1978	211	213	283	232								
accumulation	211	424	707	939								

EQUIVALENT TIME TABLE FOR THE JOBS OF THE EXTERNAL USERS - Monthly and Cumulative Statistics

	January	February	March	April	May	June	July	August	September	October	November	December
Year 1977	13	14	18	16	13	22	19	18	27	25	21	20
accumulation	13	27	45	61	74	96	115	133	160	185	206	226
Year 1978	12	10	11	46								
accumulation	12	22	33	79								

EQUIVALENT TIME TABLE FOR ALL JOBS OF ALL USERS - Monthly and Cumulative Statistics

	January	February	March	April	May	June	July	August	September	October	November	December
Year 1977	158	241	314	242	202	294	266	217	299	299	318	235
accumulation	158	399	713	955	1157	1451	1717	1934	2233	2532	2850	3085
Year 1978	276	261	356	298								
accumulation	276	537	893	1191								

Statistics of computing installation utilization

Report of computing installation exploitation for the month of April 1978

	YEAR 1978	YEAR 1977
Number of working days _____	19 d	18 d
Work hours from 8.00 to 24.00 for _____	16.00 h	16.00 h
Duration of scheduled maintenance _____	25.75 h	18.99 h
Duration of unexpected maintenance _____	28.83 h	15.67 h
Total maintenance time _____	54.58 h	34.66 h
Total exploitation time _____		253.34 h
CPU time in problem mode _____	136.97h	119.86h
Conversational Systems:		
CPU time _____	2.80 h	1.40 h
I/O number _____	526,000	198,000
Equivalent time _____	6.60 h	2.70 h
Elapsed time _____	326.00 h	98.10 h
Batch processing:		
Number of jobs _____	8,532	8,286
Number of cards read _____	1,958,000	2,275,000
Number of cards punched _____	115,000	181,000
Number of lines printed _____	28,294,000	25,637,000
Number of pages printed _____	679,000	575,000

BATCH PROCESSING DISTRIBUTION BY REQUESTED CORE MEMORY SIZE

	100	200	300	400	600	800	1000	1400	total
Number of jobs	1847	3001	1798	1089	280	64	76	4	8159
Elapsed time (hrs)	50	382	528	189	155	23	47	2	1376
CPU time (hrs)	3	26	30	30	17	7	22	0.7	136
Equivalent time (hrs)	17	54	73	81	28	10	29	1	293
Turn around time (hrs)	1.0	1.7	2.6	3.0	4.2	4.9	5.7	7.1	2.1

PERCENTAGE OF JOBS FINISHED IN LESS THAN

TIME	15'	30'	1h	2h	4h	8h	1D	2D	3D	6D
% year 1977	29	47	65	81	92	97	99	99	99	100
% year 1978	27	42	59	74	88	97	98	100	—	—

Utilisation of computer center by the objectives and appropriation accounts for the month of April 1978

IBM 370/165
equivalent time in hours

1.20.2	General Services - Administration - Ispra	45.08
1.20.3	General Services - Technical - Ispra	5.15
1.30.4	L.M.A.	—
1.90.0	ESSOR	20.11
1.92.0	Support to the Commission	2.06
2.10.1	Reactor Safety	120.64
2.10.2	Plutonium Fuel and Actinide Research	5.08
2.10.3	Nuclear Materials	1.73
2.20.1	Solar Energy	1.13
2.20.2	Hydrogen	—
2.20.4	Design Studies on Thermonuclear Fusion	5.20
2.30.0	Environment and Resources	8.63
2.40.0	METRE	5.42
2.50.1	Informatics	9.47
2.50.3	Safeguards	2.06
TOTAL		231.76
1.94.0	Service to External Users	46.13
TOTAL		277.89

Note to TSO Users

System Group

The system group informs the TSO-users that the following new features are available under TSO:

1. the TSO COBOL prompter
2. the COPY-command
3. the FORMAT-command
4. the LIST-command
5. the MERGE-command
6. the attachment of TEKTRONIX graphics terminals
7. the LIBRARIAN/TSO interface

The **TSO COBOL prompter** allows the user to utilize the COBOL-compiler directly from TSO. It is the new version 3.3 of the COBOL compiler which is activated in this way and the user should pay attention to the fact that programs compiled with the new version of the compiler are not compatible with programs compiled with the old version 3.2 of the compiler.

More information concerning the TSO COBOL prompter can be found

- by typing the TSO-command **HELP COBOL** or
- by requesting from the Computing Support Library the manual GC28-6433 **IBM OS (TSO) COBOL PROMPTER - TERMINAL USER'S GUIDE AND REFERENCE**

The COPY command provides the means to:

- duplicate sequential or partitioned data sets
- add members to a partitioned data set
- merge two partitioned data sets
- resequence the line number of copied records
- change the record length, the blocksize, and the record format when copying into a sequential data set

The FORMAT command provides comprehensive, flexible formatting capabilities that are particularly applicable to text-oriented output operations. This command allows the terminal user to:

- print a heading on each page
- center lines of text between margins
- control the amount of space for all four margins on the page
- justify left and right margins of lines of text
- number pages of output consecutively
- halt printing when desired
- control line and page length

The LIST command provides the means to:

- print some or all records of a sequential data set or member of a partitioned data set
- print specified columns of data from within each record of the data set or member

The MERGE command provides the means to:

- merge all or part of a data set into a specific area within another data set
- resequence line numbers in a merged data set or member

More information concerning the new commands can be obtained by using the HELP command of TSO or by consulting the manual: SC28-6766 OS/MVT-TSO DATA UTILITIES - USERS GUIDE AND REFERENCE - which is available from the Computing Support Library.

The attachement of Tektronix 4012/13 and 4014/15 graphics terminals under TSO offers the possibilities to use this kind of terminals as normal TSO A/N terminals as well as graphics input-output devices. More information concerning this attachement can be obtained from Mr. A.A. Pollicini, tel. 701.

The LIBRARIAN/TSO interface allows the user to access and manipulate LIBRARIAN data sets from a TSO terminal. More information concerning the facilities of the LIBRARIAN-package can be found in the Computing Centre Newsletter Special Issue April 1978.

For more information concerning the LIBRARIAN/TSO interface, see the article «The LIBRARIAN/TSO Interface now in use», published in the present Newsletter.

Furthermore the system group would like to remind all TSO-users that since May 18th, every day - from 12.00h to 12.30h - there is one member of the system group available for TSO consulting in the Computing Support Library, and that since May 10th TSO is available every day from

08.30h to 12.30h
14.00h to 18.00h

After 18.00 TSO will be available up to 19.30 if there are users on the system. (The usage has to be confirmed by a message sent to the operator). When there are no more TSO users after 18.00h, TSO will be closed before 19.30h.

Summary of the most important articles published in the Computing Centre Newsletters till March 1978, No. 19.

Title	Author	Issue
Private Program Libraries	P.A. Moinil, H.I. de Wolde	No. 2 June 1976
EUROCOPI European Computer Program Inst.	G. Gaggero	No. 2 June 1976
WANG 2200	C.L. van den Muyzenberg	No. 3 July 1976
Simulation Techniques at the JRC Computing Centre	F. Argentesi	No. 3 July 1976
Acquisition, Manipulation et Stockage de l'Information	J. Pire	No. 4 September 1976
Structured Programming	C.L. van den Muyzenberg	No. 4 September 1976
A Programming Language for you	A.A. Pollicini	No. 5 October 1976
Catalogued Procedure PLPCLGS —	C.L. van den Muyzenberg	No. 5, Oct. 1976 No. 9, March '77
Le Coût du Centre de Calcul Années 1973 - 1976	J. Pire	No. 9, March 1977
SHELTRAN: An Example of Application	A.A. Pollicini	No. 6 November 1976
The COREA System	G. Crestoni, G. Gaggero, A.A. Pollicini	No. 6 November 1976
Introduction to Data Base Management Systems	A. Borella, S. Capobianchi	No. 6 November 1976
An Example of the Use of the COREA System	G. Gaggero, A.A. Pollicini	No. 7 January 1977
IMS - Rules for Application	A. Borella	No. 7, Jan. 1977
Evolution du Centre de Calcul au cours de la période '73-'76	J. Pire	No. 7 January 1977
The Graphics Facilities at the Computer Centre	Herman I. de Wolde	No. 8 February 1977
Software Portability: An Introduction to the Problem	A.A. Pollicini	No. 8 February 1977
IBM Fortran IV (H Extended)	C. Pigni	No. 10 April 1977
The System Software at the Computing Centre	D. Koenig	No. 10 April 1977
Present Status and Possible Development		
Portability of FORTRAN Programs	A.A. Pollicini, G. Prinzivalli	No. 11 May 1977

Title	Author	Issue
A European Informatics Network Support to Computing	A. Endrizzi H.I. de Wolde, C. Pigni, A. Pollicini	No. 11, May 1977 No. 11 May 1977
Project COST 11 - European Informatics Network Implementation Architecture	K. Weaving	No. 12 June 1977
Testing by Assertions	H. Fangmeyer, K. Hanke, C.L. van den Muyzenberg	No. 13 July 1977
The Operating System OS/MVT: An Overview	D. König, P. Moinil	No. 13, July 1977
IBM Time Sharing Option (TSO) - Concepts, Features and Facilities	C. Daolio, D. Koenig	No. 14 September 1977
Mathematical Subroutine Packages	Herman I. de Wolde	No. 15, Oct. 1977
GINO-F, A Graphics Package	Herman I. de Wolde	No. 15, Oct. 1977
U.G. Internal Meeting of October 20th	J.P. Halleux	No. 16 November 1977
Le Calcul Formel avec FORMAC	F. Rechenmann	No. 16, Nov. 1977
Réalisations 1977 - Projects 1978	J. Pire	No. 16, Nov. 1977
U.G. Minutes of the 1st Meeting Computer Centre	J.P. Halleux	No. 17 January 1978
Support to Computing	Herman I. de Wolde	No. 17, Jan. 1977
Programming Foundations	W. Boettcher, R. Jaarsma, A.A. Pollicini	No. 18 February 1978
How to Use "GRAPHIT"	H.I. de Wolde, A.A. Pollicini	No. 19, March 1978
U.G. Minutes of the 2nd Meeting Computer Centre	J.P. Halleux	No. 19 March 1978

Editorial Note

The following literature may be read at the Computing Support Library (building 36) :

Newspapers

Computer Weekly	(till No. 598, April 27, 1978)
Computing	(till Vol. 6 - No. 18, May 4, 1978)
Go Information	(till No.1, March 1978)
Rivista di Informatica (AICA)	(till Vol.7 - No.1, 1978)
Siemens Data Report	(till 1/78)
APEC Journal	(till winter 1977/78)
Uomini e Computer Come	(till No. 14, Januar 1978)
Computer Products International	(till April 1978)
Quaderni di Informazione E.D.P.	(till Sept. 1978)
INFOTEC	(till Vol. 3, May 1978)

Computing Centre Newsletters

Le Canal (Bulletin d'Information du Centre Interuniversitaire de Calcul de Grenoble)	(till No.55, May 1978)
Notizie sui Sistemi di Elaborazione dati del C.N.E.N.	(till No.7, Sept. 1977)

The Newsletter is available at:

**Mrs. A. Cambon
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***Des exemplaires du Bulletin
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**Mme A. Cambon
Support to Computing
Bât. 36 - Tel. 730**

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